

ERASMUS+ PROGRAMME
Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP

ECO-CAR:
Vocational Training Diploma on Electrical and Hybrid Vehicles

Minutes of
3rd Steering and Scientific Committees Meeting

June 30th – July 1st 2022
Thursday – Friday

Ostwestfalen-Lippe University of Applied Sciences (TH-OWL)

Location: <https://goo.gl/maps/SFxbENKBZfAK3bNu5>





Participants List

Name	Institution
Prof. Ahmed Al-Salaymeh	The University of Jordan
Prof. Mohammad Hamdan	The University of Jordan
Eng. Rasha Al-Baik	The University of Jordan
Eng. Sara Al Twassi	The University of Jordan
Ms. Hanan Hasan	The University of Jordan
Prof. Fahmi A. Al-Rub	Jordan University of Science and Technology
Eng. Salaheddin Abu Yahya	Jordan University of Science and Technology
Eng. Ghena Barakat	Jordan University of Science and Technology
Prof. Omer Maaitah	Mutah University
Dr. Mohammad Almajali	Mutah University
Dr. Wa'el Adaileh	Tafila Technical University
Dr. Eyad Almaita	Tafila Technical University
Dr. Ahmad Mustafa	Tafila Technical University
Prof. Rebhi Damseh	Al- Balqa' Applied University
Dr. Mamoun Al-Smadi	Al- Balqa' Applied University
Dr. Mohammad Bani-Khaled	Applied Science Private University
Prof. Abdullah Abdullah	Al Hussein Technical University
Prof. Tarek Tutunji	Al Hussein Technical University
Dr. Loai Dabbour	Al-Zaytoonah University of Jordan
Dr. Nabeel Abu Shaban	Al-Zaytoonah University of Jordan
Eng. Eman AbdelHafez	Al-Zaytoonah University of Jordan
Prof. Salman Ajib	Technische Hochschule Ostwestfalen-LIPPE (TH-OWL)
Mr. M.Sc. Timo Broeker	Technische Hochschule Ostwestfalen-LIPPE (TH-OWL)
Eng. Stephan Bihn	Rheinisch-Westfaelische Technische Hochschule Aachen (RWTH-Aachen)
Dr. Florian Ringbeck	Rheinisch-Westfaelische Technische Hochschule Aachen (RWTH-Aachen)
Prof. Michele Anatone	Universita Degli Studi Dell'aquila (UNIVAQ)
Dr. Carlo Villante	Universita Degli Studi Dell'aquila (UNIVAQ)
Dr. Ivan Dyukarev (online)	Universidad de la Iglesia de Deusto Entidad Religiosa (UD)
Sara Goitia Ubierna (online)	Universidad de la Iglesia de Deusto Entidad Religiosa (UD)
Dr. Jon Garcia Barruetabeña (online)	Universidad de la Iglesia de Deusto Entidad Religiosa (UD)
Dr. Clio Vossou (online)	National Technical University of Athens (NTUA)

Minutes of the Meeting

The 3rd Steering and Scientific Committees Meeting was conducted in Ostwestfalen-Lippe University of Applied Sciences (TH OWL) in Höxter, Germany on June 30th – July 01st, 2022. In addition, ZOOM video conferencing has been launched in parallel for whom could not attend the meeting physically.

The meeting started by a welcome speech by the project local coordinator at TH-OWL Prof. Salman Ajib and by the Vice Dean of the Faculty at TH-OWL Prof. Martin Oldenburg introducing TH-OWL in brief to the participants. Then, a welcome speech by the project general coordinator and viewing the agenda of the meeting by Prof. Ahmed Al-Salaymeh.

ECO-CAR Project in Brief

Prof. Ahmed Al-Salaymeh presented ECO-CAR project in brief. He outlined the project objectives, indicators, progress of work packages and their expected results. Prof. Al-Salaymeh has underlined the achievements of each WP up to date and what is expected from each WP to be achieved in the upcoming months. The overall plans are as follow:

ECO-CAR Courses Clusters

ECO-CAR has established (9) clusters for the aim of developing the courses of ECO-CAR diplomas. Each cluster team has presented the following:

- ✓ Courses outlines
- ✓ Courses content
- ✓ Upcoming tasks and challenges
- ✓ Timeline to submit the cluster material

Cluster	Leader and Co-leader	Status and Upcoming tasks
Cluster 1: Hybrid and Electric Vehicle Basics	Leader: BAU Co-leader: NTUA Partners: Aachen, MU, UJ	Full Content and final check and review by Scientific and Quality committees
Cluster 2: Battery Storage Technology, Charging systems, and Recharging Infrastructure	Leader: Aachen Co-leader: TH-OWL Partners: UJ, JUST, ZUJ	<ul style="list-style-type: none"> - Material quality need more work - One topic has to be covered (Hybrid energy storage systems) and <u>will be prepared by Prof. Mohammed Hamdan and Eng. Eman Abdelhafez</u> - ZUJ need to submit the updated material to the cluster leader before mid of July



Cluster 3: Electric and Hybrid Vehicles Diagnosis for Maintenance and Repair	Leader: TTU Co-leader: HTU Partners: BAU, Aachen	This Cluster is finalized and need a final check by the scientific and quality committees
Cluster 4: Internal Combustion Engines in Hybrid Vehicles	Leader: BME Co-leader: MU Partner: JUST, HTU, UNIVAQ, UJ	This Cluster is finalized and need a final check by the scientific and quality committees
Cluster 5: Automotive Electricity, Electronics, Sensors, and Actuators	Leader: HTU Co-leader: ZUJ Partner: TTU, BME, UJ	<ul style="list-style-type: none"> - FG1 course is only 50% accomplished and Dr. Eyad Maaitah, Dr. Mohammed Al-Majali and Prof. Tarek Tutunji will cooperate to finalize it. To be finalized by end of July. - ZUJ material needs editing and to be more practical.
Cluster 6: Vehicle Dynamics	Leader: ASU Co-leader: UD Partner: UNIVAQ, NTUA, JUST	The cluster is still in progress and will be finalized within a month. Some courses are submitted and fully prepared.
Cluster 7: Health and Safety	Leader: MU Co-leader: UNIVAQ Partner: BAU, ZUJ, BME, UJ	Finalized. A final input from BME training material.
Cluster 8: Electrical Machines and Drives	Leader: TH-OWL Co-leader: ASU Partner: HTU, BAU, UJ	<ul style="list-style-type: none"> - Only Control Systems course is still under progress by HTU, ASU, and JUST. Will be submitted in 15th of July.
Cluster 9: Labs & Workshops	Leader: BAU Co-leaders: TTU, JUST Partner: UD, UNIVAQ, HTU, ASU	<ul style="list-style-type: none"> - Material is ready except powertrain labs

And agreed on the following:

No.	Task	Responsibility	Deadline
1.	Review courses by specific Scientific and Quality Committees	To be established by the project coordinator	Once the courses are ready
2.	Extend the deadline for submitting the courses till end of July	Clusters Committees	End of July
3.	Assign a committee with a leader for each cluster to translate FG2 and FG3 courses from English language to Arabic Language	To be established by the project coordinator	Once the courses are ready

ECO-CAR Work packages (WPs)

WP1: Establishing university-enterprise cooperation

Duration: M1 to M36

Lead University: Jordan University of Science and Technology (JUST)

Co-Lead University: Mutah University (MU), Al-Hussein bin Abdullah II Technical University (HTU) & Universidad de la Iglesia de Deusto Entidad Religiosa (UD)

Overall Plan:

Number	Plan	Duration
1	Proactively identify and seek out network members from different locations.	M1
2	Provide the network members with the needed information about the project aims and activities.	M1
3	Prepare a registration form.	M1
4	Creating a Network of Community Support professionals, potential funders and investors and other stakeholders. The Network members will be involved in different activities of the project.	M5
5	Conduct meetings with enterprises to include them in the design and implementation of the project, to understand stakeholders' interests, concerns and culture.	M5
6	Organise workshops and seminars to exchange information.	M6-M36
7	Sign collaboration agreements with enterprises and training centres to let the students make their internships.	M6

Eng. Salaheddin Abu Yahya (JUST) presented the progress of this work package, registration form as two versions are prepared (Arabic and English) to accommodate with the mother language of the target

sector, and the number of registered members in the network since the collected responses are stated below:

Jordanian Partners	Number of network members registered	Remained number of network members to be registered	European Partners	Number of network members registered	Remained number of network members to be registered
UJ	13	0	TH-OWL	2	2
JUST	10	0	UD	3	1
TTU	10	0	NTUA	5	0
BAU	8	2	RWTH-Aachen	2	2
MU	9	1	UNIVAQ	0	4
HTU	9	1	BME	0	4
ASU	5	5	Total	<u>12 members</u>	<u>14 members</u>
ZUJ	7	3			
Total	<u>71 members</u>	<u>12 members</u>			

And agreed on the following:

No.	Task	Responsibility	Deadline
1.	UNIVAQ and BME have to provide at least 2 members for ECO-CAR Network. Also, RWTH-Aachen, TH-OWL still have to provide at least 1 more member.	BME, RWTH-Aachen, TH-OWL, and UNIVAQ	August, 2022
2.	JUST started the process of signing a collaboration agreement with Automotive Technology Academy (ATA)	JUST	Already started
3.	Organise workshops and seminars to exchange information.	All partners	Continuous progress
4.	Sign collaboration agreements with enterprises and training centres to let the students make their internships.	All partners	August, 2022
5.	Agreement template has been sent by UJ to be followed by partners	UJ	Already sent

WP 2: Baseline Study

Duration: M1 to M6

Lead University: Applied Science University (ASU)

Co-Lead University: Tafila Technical University (TTU), Al-Balqa Applied University (BAU) & Universita Degli Studi Dell'Aquila (UNIVAQ)

Overall Plan:

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP.	M1
2	WP leader will design the four surveys in coordination with WP5 leader and submit them to be approved by Technical Committee.	M2
3	Partners will circulate the surveys to the target groups.	M2
4	Co-leaders will analyze the responses under the leader supervision and generate one report.	M4
5	Other WP's will be based on generated results of this surveys.	M5
6	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	M6

Dr. Mohammed Bani Khaled (ASU) presented the progress of this work package and the action plan, and agreed on the following:

No.	Task	Responsibility	Deadline
1.	Final version of the report has been submitted and approved by all partners and stakeholders	WP leader and scientific committee	submitted
2.	The scientific paper has been submitted finalized and submitted to the International Journal of Integrated Engineering	UJ, ASU, BAU, TTU	submitted
3.	Distribute tasks among participants for preparing the 2 nd research paper.	ASU	Start no later than July, 2022

WP 3: Capacity Building

Duration: M5 to M33

Lead University: National Technical University of Athens (NTUA)

Co-Lead University: Applied Science University (ASU), Rheinisch-Westfaelische Technische Hochschule Aachen (RWTH Aachen) & Budapesti Muszaki es Gazdasagtudomanyi Egyetem (BME)

Overall Plan:

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP.	M5
2	WP leader will set selection criteria for the workshops.	M5
3	Workshop topics will be matching the hosting university expertise (Topics in electrical and hybrid vehicles and how to prepare and teach e-courses): <ol style="list-style-type: none"> (6) Training workshops in 5 EU countries for (90) academic and technical staff, (M7, M10, M13, M16, M19, M21). (1 or 2) Training workshop in 3 or 4 EU countries for (24) students in Europe, (M30-M33). (8) Technology-enhanced (In-house) teacher training for (600) staff member. 	M7-M33
4	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	

Dr. Clio Vossou (NTUA) presented the progress of Capacity Building Plan work package and the action plan. Also, each EU partner presented a brief of the training workshop they will held for staff (dates and subjects, etc.) were presented as following:

Table 1: Training Workshops by EU

Universities	Lessons & Laboratory	DATES
BME	Each day will have a focal topic: <ul style="list-style-type: none"> Trends in automotive sector Vehicle Dynamics Drivetrain elements NVH in e mobility Infrastructural questions Possible visits to enterprises & manufacturers during workshops One of the days can be substituted with visit at ZalaZONE brand new proving ground and another day could be in Bosch Research Center Budapest.	Accomplished
UD	Lessons <ul style="list-style-type: none"> Hybrid & Electric Vehicle Basics Dynamics of Vehicles Teaching methodology 	4–8th July 2022 Postponed Suggested date: 9 – 13 January 2023

	<p>MORE: Vibroacoustic Comfort in Road Vehicles; Vehicle Dynamics; Simulation Techniques</p> <p>Laboratory</p> <ul style="list-style-type: none"> • Vehicle modelling using Matlab Simulink Vehicle modelling using Carmaker • Vehicle components modelling using ANSYS Vehicle dynamics characterization by means of experimental measurements <p>MORE: Vibration measurement</p> <p>Visits: the Automotive Intelligence Center</p>	
TH-OWL	<ul style="list-style-type: none"> • Hybrid and Electric Vehicle Basics • Battery Technology, Charging safety and Recharge infrastructure • Automotive electricity, Electronics, Sensors and Actuators • Teaching methodology <p>Visits: To local manufacturer</p> <p>The content of the workshop will be in link to cluster 8.</p>	<p>22-26th of August 2022 Postponed</p> <p>Suggested date: January, 2023</p>
UNIVAQ	<ul style="list-style-type: none"> • Hybrid and Electric Vehicle Basics • Internal combustion engines in hybrid vehicles • Well to wheel LCA Calculations 	<p>5-9th September 2022 Postponed until further notice</p>
NTUA	<p>Lessons</p> <ul style="list-style-type: none"> • Hybrid and Electric Heavy Vehicle Basics • EV & HEV Technology and hazardous material • Dynamics of vehicle, active and passive safety <p>Laboratory</p> <ul style="list-style-type: none"> • Vehicle dynamic measurements • Vehicle modeling using Matlab • Vehicle modeling using TruckSim <p>Visits Local Manufacturer of heavy vehicle's superstructures</p>	<p>26-30th September 2022 Postponed</p> <p>Suggested date: February, 2023</p>
RWTH - Aachen	<p>Lessons</p> <ul style="list-style-type: none"> • Short lecture on the Fundamentals of Electromobility • Extensive lecture on the fundamentals of Batteries and their Application in Electromobility (Principles, aging, battery packs, battery management systems, etc.). • Digitalization of teaching. <p>Laboratory A laboratory training on battery fundamentals can be provided.</p> <p>Visits Under investigation (Ford production plant / Etron production of Audi in Brussels)</p>	7 – 11th November 2022

Also, the **main criteria of selection of the staff** has been set up, as following:

- Professional background / academic degree
- English skills
- Gender
- Time of apprenticeship
- Plans for the professional future at the university
- Relevance to the main subject of the workshop



- Involved in the preparations of ECO-CAR clusters courses

Each **training workshop** has **material to be set and developed** as following:

a) Material for each workshop (before)

- Have to be set
 - Training goals
 - Learning objectives
 - Learning methods
 - Documentation of learning
- Has to be developed the training material:
 - Examples
 - Exercises
 - Learning activities
 - Case Studies
 - Has to be prepared

b) Material for each workshop (after)

- Has to be prepared:
 - Report documenting each workshop

On the other hand, the upcoming online workshops have been set as follows:

Table 2: Online workshops by JO partners

University	Date
TTU	27/07/2022
ZUJ	July, 2022
BAU	August, 2022
MU	During summer semester (to be confirmed later)

Following were agreed on:

No.	Task	Due Date
1.	Next online workshops will be by TTU and ZUJ	July, 2022
2.	Next staff training will be by RWTH-Aachen in November, 2022	7 – 11th November 2022
3.	Update the “Capacity Building Plan” report to include the physical training workshops and their topics, based on our meeting outputs.	15.07.2022
4.	RWTH-Aachen training workshop lessons is fit with cluster 1 and cluster 2 subjects.	7 – 11th November 2022
5.	NTUA training workshop lessons is fit with cluster 1 and cluster 6 subjects.	February, 2022
6.	Send the training material of BME training workshop to EU partners to exchange experience in preparing training workshop within ECO-CAR project.	20.07.2022

7.	Circulate the physical workshops schedule and topics to the partners	07.07. 2022
8.	Each JO partner has to name 2 representatives (and other 2 backup names) for each upcoming workshop at EU partner based on their relevance to the workshop topic.	Once the workshops dates and topics are set up

WP 4: Establishment of EV/HEV labs

Duration: M6 to M21

Lead University: Al-Balqa Applied University (BAU)

Co-Lead University: The University of Jordan (UJ), Jordan University of Science and Technology (JUST) & National Technical University of Athens (NTUA)

Overall Plan:

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP.	M2
2	Prepare a list of main components in ECO-CAR centers.	M2
3	WP leader and co-leaders will set the list of needed equipment based on WP2.	M4
4	Central Tender is published.	M10
5	Center is fully equipped and operational.	M18
6	Center establishment.	M21
7	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	

Prof. Rebhi Damseh (BAU) presented the progress of this work package and the action plan. While preparing to distribute ECO-CAR equipment, each University from JO partners is required to allocate a suitable center/Lab in the relevant department. The center/Lab must contain:

- A space for theoretical courses (Smart Classroom) in which a Smart board will be established.
- A separate space (Lab or workshop) must be allocated for the Lab equipment.

Both Locations must satisfy the following requirements:

- The availability of sufficient free space for 15 students according to accreditation criteria.
- The availability of sufficient lighting.
- The availability of appropriate ventilation. (Windows in the Smart Classroom, windows and suction fan for the Lab).
- The availability of sufficient and reliable electrical outlet.
- The availability of student seats in the smart classroom, Workbenches (Tables) and stools in the lab. (For 15 students).
- The Lab must be in the ground Level with external wide entry and sufficient external space for car parking.
- The Availability of Lab Technician.

- The availability of basic Lab furniture (desk, chair, storage space whiteboard etc.).
- The availability of firefighting equipment.

And was agreed on:

No.	Task	Responsibility	Due Date
1.	Receive Equipment by Jordanian Partners	JO partners	August, 2022
2.	Setup equipment in center/Lab in the relevant department	JO partners	August, 2022
3.	Review the Lab manuals according to the course outline (cluster 9) and the received equipment	Cluster 9 committee	August, 2022
4.	Prepare and submit the Final Progress report based on collected feedback from Co-Leaders at the end of WP	WP leader	October, 2022

WP5: Developing ECO-CAR Professional Diploma

Duration: M4 to M34

Lead University: Budapesti Muszaki es Gazdasagtudomanyi Egyetem (BME)

Co-Lead University: The University of Jordan (UJ), Technische Hochschule Ostwestfalen-LIPPE (TH-OWL), Rheinisch-Westfaelische Technische Hochschule Aachen (RWTH Aachen) & Universita Degli Studi Dell'aquila (UNIVAQ)

Overall Plan:

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP with due dates.	M4-M6
2	Courses selection based on WP2 results.	M7
3	WP leader will prepare a course outline template with learning outcomes.	M8
4	Creation of committees responsible to develop the selected courses.	M9
5	Diploma accreditation.	M12
6	Tuning Workshop.	M15
7	Courses are developed.	M20
8	Piloting phase.	M16-M34
9	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	

Prof. Ahmed Al-Salaymeh has briefly discussed the progress of this work package and its tasks. Also, presented the action plan for the courses clustering and the clusters committees. Each committee will be responsible to review, modify, enrich and integrated the European experience to the received courses outlines. And followed were agreed on:

#	Task	Responsibility	Due Date
1.	Accreditation of the diploma/courses has to be done to avoid the delays and risks	Local partners	No later than 15.08.2022
2.	The courses content preparation has been extended for the remaining courses	Cluster committees	30 th of July, 2022
3.	Piloting and implementation of ECO-CAR Professional Diploma	UJ, MU, ASU	Max 01.10.2022
4.	Piloting and implementation of ECO-CAR Community College Diploma	BAU, TTU	Max 01.10.2022
5.	Piloting and implementation of ECO-CAR Vocational Diploma	UJ, JUST, ASU, ZUJ, HTU, MU	Max 01.10.2022
6.	Virtual learning portal will be established and hosted by UJ	UJ	July, 2022
7.	Tuning workshop will be conducted either in BME or UJ	BME, UD, UJ	October, 2022
8.	Establish a scientific committee to revise and check the prepared courses content	Prepared by the project coordinator	Established during the StC meeting
9.	The courses have to be checked and reviewed by a scientific committee by 23 rd of July and to get updated courses 31 st of July and final approval is by 4 th of August	scientific committee	1st review: 23.07.2022 Get responses: 31.07.2022 Final approval: 04.08.2022
10.	Quality Check is by 13 th of August and final approval is by 20 th of August	ECO-CAR Quality committee	1st review: 13.08.2022 Final approval: 20.08.2022
11.	Distribute translation tasks among clusters committees to translate FG2 and FG3 from English to Arabic.	Clusters committees	Translation will be finalized by 31 st of August
12.	Fill in the contact hours excel sheet by each cluster leader with his cluster courses contact hours	Clusters leaders	18.07.2022
13.	Establish course evaluation form to be followed by the scientific committee for courses check	Prepared by the project coordinator	Accomplished and to be distributed

The courses in all focus groups are 16 weeks (which means a total of 48 hours). However, each cluster committee can modify the number of weeks based on their full study of the courses. The attached



excel file has the full details for the courses clustering (team for each cluster, clusters classification).

Also, you can reach it online through this link:

https://docs.google.com/spreadsheets/d/1JDJ4ox4911dxQ_GF7DD75UINwTEBC5_v/edit?usp=sharing&ouid=103480218674595258682&rtpof=true&sd=true

Also, the members' allocation per cluster from each university can be reached via this link:

https://docs.google.com/spreadsheets/d/1HNXmpywoUcFZhWVfY--KKcUagqo5E4Zk_IOBGBRejX4/edit?usp=sharing

To reach the clusters drive:

https://drive.google.com/drive/folders/1PsexpKj0RUhjQso_Jryv5fDH4aY6mncIM?usp=sharing

Scientific committee for courses content check and translation tasks distribution:

<https://docs.google.com/spreadsheets/d/1EZLorAYP-es9c3tUXCiWYhV64WKT2H5Y/edit?usp=sharing&ouid=103480218674595258682&rtpof=true&sd=true>

Course evaluation form:

<https://docs.google.com/document/d/1TqOpUh4MN3C2ffhggw7rf8ziuJITmAxp/edit?usp=sharing&ouid=103480218674595258682&rtpof=true&sd=true>

ECO-CAR Courses contact hours:

https://docs.google.com/spreadsheets/d/1_E0RGaJN6jX-vqHtj2qj2hHDhFNleV4/edit?usp=sharing&ouid=103480218674595258682&rtpof=true&sd=true

WP6: Quality and Impact Evaluation

Duration: M1 to M36

Lead University: Universidad de la Iglesia de Deusto Entidad Religiosa (UD)

Co-Lead University: Tafila Technical University (TTU), Al-Zaytoonah University of Jordan (ZUJ) & Budapesti Muszaki es Gazdasagtudomanyi Egyetem (BME)

Overall Plan:

Number	Plan	Duration
1	Quality committee will be formed during the kick off meeting.	M1
2	WP leader will set a detailed plan for the WP with due dates.	M2

3	WP leader will prepare online evaluation links for all meetings, workshops and circulate them to partners after each event, and the results will be analyzed by the co-leaders.	M2
4	WP leader will prepare the Quality assurance tools.	M5
5	WP leader will prepare online evaluation links for all piloted courses, and circulate them to partners, and the results will be analyzed by the partners.	M10
6	Courses will be peer reviewed against a developed checklist.	M12
7	External evaluator will be appointed by WP leader.	M12
8	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	

Dr. Ivan Dyukarev presented the progress of Quality and Impact Evaluation Plan work package and the action plan for the next stages, and following were agreed on:

No.	Task	Responsibility	Due Date
1.	Evaluate the meeting	UJ	During the meeting
2.	An amendment to UD partner agreement to add the EE budget to their university.	UD, UJ	August, 2022
3.	The efficiency of project management and the adequacy of the communication in the partnership will be evaluated at each half-year's end except first year (M12, M18, M24, M30, M36), in the corresponding Quality and Monitoring Report.	UD	Continuous process
4.	The project performance survey will be delivered to partners by the QM within 10 days after the end of corresponding period. Partners must respond within 1 week after receiving the survey. If after a week the participation percentage is <50%, a reminder will be sent, allowing 1 week after the uploading of the survey to complete it.	UD	Continuous process
5.	The QM (with the support of the EE) within 10 days after the deadline of the surveys, will collect all the answers from the partners, perform a statistical analysis and integrate them into a report which will reflect the views of the consortium on its progress, including any suggestions for changes and improvements. The results of this measurement will be part of the corresponding Quality and Monitoring report.	UD	Continuous process
6.	After each measurement, a Short Quality and Monitoring report will be drawn up. The meeting is considered approved if the weighted average for the percentage of	UD	Continuous process

	agreement is more than equal than 70% of answers. Scores less than this will require corrective actions by the partnership, led by the Project Coordinator (PC).		
7.	Every 6 months, a global analysis is made of all the Short Quality and Monitoring reports carried out in that period, which will form part of the Quality and Monitoring report .	UD	Continuous process
8.	After the end of the training/workshop/course , each participant will be asked to rate several aspects of the training; evaluations will be done on the spot. The questionnaires include closed questions as well as open-ended questions for remarks, comments and suggestions. All attendees are expected to fill the survey before leaving. If after the meeting the participation percentage is <50% , a reminder will be sent allowing 1 week after the uploading of the survey to complete it.	UD	Continuous process
9.	Project performance evaluation (within 10 days after the end of corresponding period) 1. First evaluation done in May 2022 2. Second evaluation : period deadline 15/06/2022, evaluation date 25/06/2022 3. Third evaluation : period deadline 15/12/2022, evaluation date 25/12/2022 4. Fourth evaluation : period deadline 15/06/2023, evaluation date 25/06/2023 5. Fifth evaluation : period deadline 15/12/2023, evaluation date 25/12/2023	UD	Quality and Monitoring reports First report: 30/06/2022 Second report: 25/07/2022 Third report: 25/01/2023 Fourth report: 25/07/2023 Fifth report: 25/01/2024
10.	Project performance evaluation till M18 is taking place now, via this link: https://forms.gle/qeUTme79Lsvtis569	All partners	15.07.2022
11.	Quality Check is by 13 th of August and final approval is by 20 th of August	ECO-CAR Quality committee	1st review: 13.08.2022 Final approval: 20.08.2022
12.	WP leader will prepare online evaluation links for all piloted courses, and circulate them to partners, and the results will be analyzed by the partners .	UD	Once the courses are ready

WP7: Dissemination and Sustainability

Duration: M1 to M36

Lead University: Al-Hussein bin Abdullah II Technical University (HTU)

Co-Lead University: Mutah University (MU), Al-Zaytoonah University of Jordan (ZUJ) & Technische Hochschule Ostwestfalen-LIPPE (TH-OWL)

Overall Plan:

Number	Plan	Duration
1	Dissemination committee will be formed during the kick off meeting.	M1
2	Project website will be designed, hosted and managed by University of Jordan.	M1
3	Facebook page will be created and managed by University of Jordan.	M1
4	Promotional Materials will be designed by Work Package leader.	M2
5	WP leader will set a detailed plan it will include plans for Dissemination, Sustainability and Networking.	M3
6	E-Learning platform will be created and managed by University of Jordan.	M12
7	Tester courses workshops and will be organized in Jordan.	M18
8	A three-day Final dissemination conference will be held at University of Jordan.	M35
9	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders, the report will cover all Work packages.	

Prof. Tarek Tutunji discussed the progress of Dissemination and Sustainability Plan work package and the action plan for the next stages and **Prof. Abdallah Abdallah** has discussed the marketing plan. Following were agreed on:

No.	Task	Responsibility	Due Date
1.	WP leader has approved the final version of the Dissemination and Sustainability Plan with the steering committee	HTU	Accomplished
2.	HTU will prepare the 3rd newsletter and will distribute it to the partners to collect their feedback	HTU	Covers activities till 15.07. 2022
3.	New progress will be adopted to collect the newsletter content	HTU	Continuous progress
4.	HTU will update the website content in cooperation with UJ	HTU and UJ	Continuous progress, needs links and more traffic
5.	Add ECO-CAR links to partners' websites	All partners	To be available due the project time
6.	Schedule and implement the Info-days across the project timeline and among JO universities	JO partners	One workshop for each partner. One Info Day per JO University

7.	Tester Course Workshops	JO partners	Start preparing it once the courses are ready
8.	Feasibility-Study (Excel-Sheets) developed by HTU. Each JO partner has to implement this study and provide us with the results. The link is provided below.	JO partners	31.07.2022
9.	HTU Prepared the marketing plan for ECO-CAR diploma	HTU and Co-leaders	Accomplished
10.	At least one video made about ECO-CAR by those working on it. Videos to be seen on all pages of the university	All partners	No later than November, 2022.
11.	At least two webinars geared to the community and students (Informal setting, Q & A)	JO Partners	During the project life
12.	Press releases at the beginning and graduation of each cohort	JO Partners	During the project life
13.	Reaching the automotive sector. This item aims at employability of graduates. It will also help improving training material and provide high exposure for the program and give it sustainability	JO Partners	During the project life
14.	Landing page development. Page at the main university website that will include news, graduation ceremonies, registration for next cohort, etc.	JO Partners	During the project life

Main Topics to be covered in the 3rd Newsletter:

Number	Event	Date	Organizer
1.	10 th Management online Meeting	26.01.2022	JU
2.	Online Workshop EV Charging Systems and Charging Infrastructure	07.03.2022	JUST
3.	Athens Meeting	10.03.2022 to 12.03.2022	NTUA + JU
4.	Online Workshop Modern Technology in the Diagnosing and Maintenance of Electrified Vehicles	14.03.2022	ASU + JU
5.	Information Day	28.03.2022	Mutah University



6.	Visit ECO-CAR lab in ASU	28.03.2022	ASU+JU
7.	Visit Hakama	05.04.2022	HTU
8.	Quality committee meeting	06.04.2022	UD
9.	Visit Automotive Technology Academy	14.04.2022	HTU
10.	Online Workshop Estimating the Impact of Topography and Traffic on Vehicle's Energy Consumption	28.04.2022	HTU + JU
11.	11 th online meeting	12.05.2022	JU
12.	Information Day	17.05.2022	TTU
13.	Information / Career Day	24.05.2022	HTU
14.	Hoxter Meeting	30.06.2022 to 01.07.2022	TH-OWL + JU

The following link is for the WP drive to upload the supplement documents:

https://drive.google.com/drive/folders/1sg9BxYmmd3004tJp_9cxtBrAbgNdoB5V?usp=sharing

The following link has the feasibility study and sustainability plan excel sheets and their instructions:

https://fisjo-my.sharepoint.com/:f:/g/personal/eco-car_ju_edu_io/EpfqwC6phz5FjWIOTxohYtMBlrF1A1DiHUfYxCC04QSjEw?e=78n1ZE

ECO-CAR Website:

<http://sites.ju.edu.io/en/ECO-CAR/Home.aspx>

ECO-CAR Facebook Page:

<https://www.facebook.com/Eco-Car-100321388735706>

ECO-CAR LinkedIn:

<https://www.linkedin.com/in/eco-car-a650ab214/>

ECO-CAR YouTube:

<https://www.youtube.com/channel/UC5Oj5CoWQHDuOMySLGgoF6Q>

WP8: Project Management

Duration: M1 to M36

Lead University: The University of Jordan (UJ)

Overall Plan:

Number	Plan	Duration
1	A Steering Committee (SC) will be established during the kick-off meeting part 2 with 1 representative from each partner.	M1-M36
2	A Technical and Scientific Committee (TSC) will be established during the kick-off meeting part 2.	M1-M36
3	6 coordination meetings will be conducted in Amman (KOM), Budapest, Aachen, Athens, Deusto and Amman (FC).	M1-M36
4	Monthly virtual status meetings via web-conferencing.	M1-M36
5	Regular communication will be conducted by e-mail and shared electronic database.	M1-M36
6	Progress report will be prepared every six months.	M1-M36

Prof. Ahmed Al-Salaymeh presented the progress of each work package and what is needed from partners, as tasks and activities of Project Management work package and the action plan for the next stages, and was agreed on:

No.	Task	Responsibility	Due Date
1.	Technical and Scientific Committee (TSC) has been updated for JUST	UJ	Done
2.	UJ will start the invitation letter process for RWTH-Aachen workshop	UJ	July, 2022
3.	Regular communication will be conducted by e-mail and shared electronic database	UJ	Continuous Progress
4.	The 4 th steering committee meeting will be in BME	BME	To be discussed

Table 3: StC Meetings Schedule

#	Meeting	Destination	Date
1	Kick off Meeting	Amman – (Online meeting)	January, 2021/ February, 2021
2	2 nd Steering Committee Meeting	Athens	March ,2022
3	3 rd Steering Committee Meeting	TH-OWL	30 th of June- 1 st of July, 2022



4	4 th Steering Committee Meeting	UD	11-13 January, 2023 (To be confirmed)
5	5 th Steering Committee Meeting	Budapest	Postponed from October, 2022 and to be conducted during 2023
6	6 th Steering Committee Meeting	Aachen	2023
7	Final Conference	Amman	2024

Finally, Prof. Ahmed has presented the conclusion of the 2 days meeting and got the final confirmation for the resulted tasks and decisions. Prof. Ahmed thanked participants for their attendance and thanked the host partner for their efforts in conducting the meeting.

Meeting Evaluation Link:

https://docs.google.com/forms/d/e/1FAIpQLSepINgg_iOQiSnMV7kPjdYYie2KgGsIYT57E79PsKH_UldL1Q/viewform

Photos

The meeting photos can be reached via this link:

https://fisjo-my.sharepoint.com/:f/g/person/eco-car_ju_edu_jo/Er8GY7jmu_tliBVikqY_3u4B8oqKnCFCGIKk-NCTQ336KQ?e=vkBY5e